(Previously Presented) 1. A wavelength-selective optical transmission system comprising:

a first waveguide for transmitting a multiplexed optical signal therethrough;

a second waveguide coupled to said first waveguide wherein a least one of said first and second waveguides having a set of wavelength-selective Bragg gratings disposed near a coupling section between said first and second waveguides to reflect a reflecting optical signal back to said first waveguide and for transmitting a contra-directional optical signal and a co-directional optical signal having respectively a contra-directional selected wavelength and a co-directional selected wavelength corresponding to said Bragg gratings wherein one of said contra-directional and co-directional wavelengths is chosen as a designated wavelength, and said reflecting optical signal and one of said contra-directional or co-directional optical signals are outside of a predefined range surrounding said designated wavelength.

(Previously Presented) 2. The wavelength-selective optical transmission system of claim 1 wherein:

said first waveguide and said second waveguide have two different propagation constants.

(Previously Presented) 3. The wavelength-selective optical transmission system of claim 1 wherein:

said first waveguide and said second waveguide composing of two different materials.

(Previously Presented) 4. The wavelength-selective optical transmission system of claim 1 wherein:

said Bragg gratings disposed on said first waveguide.

(Previously Presented) 5. The wavelength-selective optical transmission system of claim 1 wherein:

said Bragg gratings disposed on said second waveguide.

(Previously Presented) 6. The wavelength-selective optical transmission system of claim 1 wherein:

said Bragg gratings disposed on said first and second waveguides.

(Previously Presented) 7. The wavelength-selective optical transmission system of claim 1 wherein:

said Bragg gratings disposed on a cladding surrounding said first waveguide.

(Previously Presented) 8. The wavelength-selective optical transmission system of claim 1 wherein:

said Bragg gratings disposed on a cladding surrounding said second waveguide.

(Previously Presented) 9. The wavelength-selective optical transmission system of claim 1 wherein:

said Bragg gratings disposed on a cladding in a gap between said first and second waveguides.

(Previously Presented) 10. The wavelength-selective optical transmission system of claim 1 wherein:

said Bragg gratings comprising a periodic variation of a refractive index of an optical propagation material.

(Previously Presented) 11. The wavelength-selective optical transmission system of claim 1 wherein:

said Bragg gratings comprising a periodic variation of a structural characteristic of an optical propagation material.

(Previously Presented) 12. The wavelength-selective optical transmission system of claim 1 wherein:

said Bragg gratings comprising a periodic variation of a structural characteristic and a refractive index of an optical propagation material.

(Previously Presented) 13. The wavelength-selective optical transmission system of claim 1 wherein:

at least one of said first and second waveguides are manufactured on a substrate by applying an integrated circuit (IC) manufacturing process thereon.

(Previously Presented) 14. The wavelength-selective optical transmission system of claim 1 wherein:

said predefined range of wavelength surrounding said designated selected wavelength having a wavelength range between λmin and λmax and said first and second waveguide having an optical propagation constant of β_1 and β_2 respectively.

(Previously Presented) 15. The wavelength-selective optical transmission system of claim 14 wherein:

said contra-directional wavelength is chosen as said designated wavelength and $\beta_1 < \beta_2$ and $\frac{\lambda_{min}}{\lambda_{max}} > \max\left(\frac{2\beta_1}{\beta_1+\beta_2}, \frac{\beta_2-\beta_1}{\beta_1+\beta_2}\right)$.

(Previously Presented) 16. The wavelength-selective optical transmission system of claim 14 wherein:

said contra-directional wavelength is chosen as said designated wavelength and $\beta_1 > \beta_2$ and $\frac{\lambda_{min}}{\lambda_{max}} > \max\left(\frac{\beta_1+\beta_2}{2\beta_1}, \frac{\beta_1-\beta_2}{\beta_1+\beta_2}\right)$.

(Previously Presented) 17. The wavelength-selective optical transmission system of claim 14 wherein:

said co-directional wavelength is chosen as said designated wavelength and $\beta_1 < \beta_2$ and $\frac{\lambda_{min}}{\lambda_{max}} > \min\left[\max\left(\frac{2\beta_1}{\beta_2-\beta_1}, \frac{\beta_2-\beta_1}{\beta_2+\beta_1}\right), \frac{\beta_2-\beta_1}{2\beta_1}\right]$.

(Previously Presented) 18. The wavelength-selective optical transmission system of claim 14 wherein:

said co-directional wavelength is chosen as said designated wavelength and $\beta_1 > \beta_2$ and $\frac{\lambda_{min}}{\lambda_{max}} > \frac{\beta_1-\beta_2}{\beta_1+\beta_2}$.

(Previously Presented) 19. The wavelength-selective optical transmission system of claim 14 wherein:

said contra-directional wavelength is chosen as said designated wavelength and $\beta_2 > 3\beta_1$ and $\frac{\lambda_{min}}{\lambda_{max}} > \frac{\beta_2-\beta_1}{\beta_1+\beta_2}$.

(Previously Presented) 20. The wavelength-selective optical transmission system of claim 14 wherein:

said contra-directional wavelength is chosen as said designated wavelength and $\beta_1 < \beta_2 < 3\beta_1$ and $\frac{\lambda_{min}}{\lambda_{max}} > \frac{2\beta_1}{\beta_1+\beta_2}$.

(Previously Presented) 21. The wavelength-selective optical transmission system of claim 14 wherein:

said contra-directional wavelength is chosen as said designated wavelength and $(\sqrt{5}-2)\beta_1 < \beta_2 < \beta_1$ and $\frac{\lambda_{min}}{\lambda_{max}} > \frac{\beta_1+\beta_2}{2\beta_1}$.

(Previously Presented) 22. The wavelength-selective optical transmission system of claim 14 wherein:

said contra-directional wavelength is chosen as said designated wavelength and $\beta_2 < (\sqrt{5}-2)\beta_1$ and $\frac{\lambda_{min}}{\lambda_{max}} > \frac{\beta_2-\beta_1}{\beta_2+\beta_1}$.

(Previously Presented) 23. The wavelength-selective optical transmission system of claim 14 wherein:

said co-directional wavelength is chosen as said designated wavelength and $(\sqrt{5}-2)\beta_2 < \beta_1 < \frac{\beta_2}{3}$ and $\frac{\lambda_{min}}{\lambda_{max}} > \frac{2\beta_1}{\beta_2-\beta_1}$.

(Previously Presented) 24. The wavelength-selective optical transmission system of claim 14 wherein:

said co-directional wavelength is chosen as said designated wavelength and $\beta_1 < (\sqrt{5}-2)\beta_2$ and $\frac{\lambda_{min}}{\lambda_{max}} > \frac{\beta_2-\beta_1}{\beta_2+\beta_1}$.

(Previously Presented) 25. The wavelength-selective optical transmission system of claim 14 wherein:

said co-directional wavelength is chosen as said designated wavelength and $\frac{\beta_2}{3} < \beta_1 < \beta_2$ and $\frac{\lambda_{min}}{\lambda_{max}} > \frac{\beta_2 - \beta_1}{2\beta_1}$.

(Previously Presented) 26. The wavelength-selective optical transmission system of claim 14 wherein:

said co-directional wavelength is chosen as said designated wavelength and $\beta_1 > \beta_2$ and $\frac{\lambda_{min}}{\lambda_{max}} > \frac{\beta_1 - \beta_2}{\beta_1 + \beta_2}$.

(Previously Presented) 27. The wavelength-selective optical transmission system of claim 1 wherein:

said first waveguide having a SiO2 cladding and a doped SiO2 core and said second waveguide have a SiO2 cladding and a SiRN core.

(Previously Presented) 28. The wavelength-selective optical transmission system of claim 1 wherein:

said first waveguide having a SiO2 cladding and a doped SiO2 core and said second waveguide have a SiO2 cladding and a Si core.

(Previously Presented) 29. The wavelength-selective optical transmission system of claim 1 wherein:

said first waveguide having a SiO2 cladding and a doped SiO2 core and said second waveguide have a SiO2 cladding and a SiO_xN_y core.

(Previously Presented) 30. The wavelength-selective optical transmission system of claim 1 wherein:

said first waveguide having a SiO2 cladding and a doped SiO2 core and said second waveguide have a SiO2 cladding and a Si_3N_4 core.

(Previously Presented) 31. The wavelength-selective optical transmission system of claim 1 wherein:

said first waveguide having a SiO2 cladding and a doped SiO2 core and said second waveguide have a SiO2 cladding and a Ta_2O_5 & SiO_2 core.

(Previously Presented) 32. The wavelength-selective optical transmission system of claim 1 wherein:

said first waveguide having a SiO2 cladding and a doped SiO_xN_y core and said second waveguide have a SiO2 cladding and a SiRN core.

(Previously Presented) 33. The wavelength-selective optical transmission system of claim 1 wherein:

said first waveguide having a SiO2 cladding and a doped SiO_xN_y core and said second waveguide have a SiO2 cladding and a Si core.

(Previously Presented) 34. The wavelength-selective optical transmission system of claim 1 wherein:

said first waveguide having a SiO2 cladding and a doped SiO_xN_y core and said second waveguide have a SiO2 cladding and a SiO_xN_y core.

(Previously Presented) 35. The wavelength-selective optical transmission system of claim 1 wherein:

said first waveguide having a SiO2 cladding and a doped SiO_xN_y core and said second waveguide have a SiO2 cladding and a Ta_2O_5 & SiO_2 core.

(Previously Presented) 36. The wavelength-selective optical transmission system of claim 1 wherein:

said first waveguide having a first doped SiO_2 cladding and a doped SiO_2 core of different dopant concentration than said first doped SiO_2 cladding and said second waveguide have a second doped SiO_2 cladding and a SiRN core.

(Previously Presented) 37. The wavelength-selective optical transmission system of claim 1 wherein:

said first waveguide having a first doped SiO_2 cladding and a doped SiO_2 core of different dopant concentration than said first doped SiO_2 cladding and said second waveguide have a second doped SiO_2 cladding and a Si core.

(Previously Presented) 38. The wavelength-selective optical transmission system of claim 1 wherein:

said first waveguide having a first doped SiO_2 cladding and a doped SiO_2 core of different dopant concentration than said first doped SiO_2 cladding and said second waveguide have a second doped SiO_2 cladding and a SiO_xN_y core.

(Previously Presented) 39. The wavelength-selective optical transmission system of claim 1 wherein:

said first waveguide having a first doped SiO_2 cladding and a doped SiO_2 core of different dopant concentration than said first doped SiO_2 cladding and said second waveguide have a second doped SiO_2 cladding and a Si_3N_4 core.

(Previously Presented) 40. The wavelength-selective optical transmission system of claim 1 wherein:

said first waveguide having a first doped SiO_2 cladding and a doped SiO_2 core of different dopant concentration than said first doped SiO_2 cladding and said second waveguide have a second doped SiO_2 cladding and a Ta_2O_5 & SiO_2 core.

(Previously Presented) 41. The wavelength-selective optical transmission system of claim 1 wherein:

said first waveguide having a first doped SiO_2 cladding and a SiO_xN_y core and said second waveguide have a second doped SiO_2 cladding and a SiRN core.

(Previously Presented) 42.The wavelength-selective optical transmission system of claim 1 wherein:

said first waveguide having a first doped SiO_2 cladding and a SiO_xN_y core and said second waveguide have a second doped SiO_2 cladding and a Si core.

(Previously Presented) 43. The wavelength-selective optical transmission system of claim 1 wherein:

said first waveguide having a first doped SiO_2 cladding and a SiO_xN_y core and said second waveguide have a second doped SiO_2 cladding and a SiO_xN_y core.

(Previously Presented) 44. The wavelength-selective optical transmission system of claim 1 wherein:

said first waveguide having a first doped SiO_2 cladding and a SiO_xN_y core and said second waveguide have a second doped SiO_2 cladding and a Si_3N_4 core.

(Previously Presented) 45. The wavelength-selective optical transmission system of claim 1 wherein:

said first waveguide having a first doped SiO_2 cladding and a SiO_xN_y core and said second waveguide have a second doped SiO_2 cladding and a Ta_2O_5 & SiO_2 core.

(Canceled) 46. A wavelength-selective optical transmission system comprising:

a first waveguide for transmitting a multiplexed optical signal therethrough;

a second waveguide coupled to said first waveguide wherein at least one of said first and second waveguides having a set of wavelength-selective Bragg gratings disposed near a coupling section between said first and second waveguides wherein said first and second waveguides having different propagation constants.

(Currently Amended) 47. The wavelength-selective optical transmission system of claim 46 wherein:

a first waveguide for transmitting a multiplexed optical signal therethrough;

a second waveguide coupled to said first waveguide wherein at least one of said first and second waveguides having a set of wavelength-selective Bragg gratings disposed near a coupling section between said first and second waveguides wherein said first and second waveguides having different propagation constants; and

said first waveguide having a SiO2 cladding and a doped SiO2 core and said second waveguide have a SiO2 cladding and a SiRN core.

(Currently Amended) 48. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said first waveguide having a SiO2 cladding and a doped SiO2 core and said second waveguide have a SiO2 cladding and a Si core.

(Currently Amended) 49. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said first waveguide having a SiO2 cladding and a doped SiO2 core and said second waveguide have a SiO2 cladding and a SiO_xN_y core.

(Currently Amended) 50. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said first waveguide having a SiO2 cladding and a doped SiO2 core and said second waveguide have a SiO2 cladding and a Si_3N_4 core.

(Currently Amended) 51. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said first waveguide having a SiO2 cladding and a doped SiO2 core and said second waveguide have a SiO2 cladding and a Ta_2O_5 & SiO_2 core.

(Currently Amended) 52. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said first waveguide having a SiO2 cladding and a doped SiO_xN_y core and said second waveguide have a SiO2 cladding and a SiRN core.

(Currently Amended) 53. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said first waveguide having a SiO2 cladding and a doped SiO_xN_y core and said second waveguide have a SiO2 cladding and a Si core.

(Currently Amended) 54. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said first waveguide having a SiO2 cladding and a doped SiO_xN_y core and said second waveguide have a SiO2 cladding and a SiO_xN_y core.

(Currently Amended) 55. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said first waveguide having a SiO2 cladding and a doped SiO_xN_y core and said second waveguide have a SiO2 cladding and a Ta_2O_5 & SiO_2 core.

(Currently Amended) 56. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said first waveguide having a first doped SiO_2 cladding and a doped SiO_2 core of different dopant concentration than said first doped SiO_2 cladding and said second waveguide have a second doped SiO_2 cladding and a SiRN core.

(Currently Amended) 57. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said first waveguide having a first doped SiO_2 cladding and a doped SiO_2 core of different dopant concentration than said first doped SiO_2 cladding and said second waveguide have a second doped SiO_2 cladding and a Si core.

(Currently Amended) 58. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said first waveguide having a first doped SiO_2 cladding and a doped SiO_2 core of different dopant concentration than said first doped SiO_2 cladding and said second waveguide have a second doped SiO_2 cladding and a SiO_xN_y core.

(Currently Amended) 59. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said first waveguide having a first doped SiO_2 cladding and a doped SiO_2 core of different dopant concentration than said first doped SiO_2 cladding and said second waveguide have a second doped SiO_2 cladding and a Si_3N_4 core.

(Currently Amended) 60. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said first waveguide having a first doped SiO_2 cladding and a doped SiO_2 core of different dopant concentration than said first doped SiO_2 cladding and said second waveguide have a second doped SiO_2 cladding and a Ta_2O_5 & SiO_2 core.

(Currently Amended) 61. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said first waveguide having a first doped SiO_2 cladding and a SiO_xN_y core and said second waveguide have a second doped SiO_2 cladding and a SiRN core.

(Currently Amended) 62. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said first waveguide having a first doped SiO_2 cladding and a SiO_xN_y core and said second waveguide have a second doped SiO_2 cladding and a Si core.

(Currently Amended) 63. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said first waveguide having a first doped SiO_2 cladding and a SiO_xN_y core and said second waveguide have a second doped SiO_2 cladding and a SiO_xN_y core.

(Currently Amended) 64. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said first waveguide having a first doped SiO_2 cladding and a SiO_xN_y core and said second waveguide have a second doped SiO_2 cladding and a Si_3N_4 core.

(Currently Amended) 65. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said first waveguide having a first doped SiO_2 cladding and a SiO_xN_y core and said second waveguide have a second doped SiO_2 cladding and a Ta_2O_5 & SiO_2 core.

(Currently Amended) 66. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said Bragg gratings reflecting an optical signal back to said first waveguide and transmitting a contra-directional optical signal and a co-directional optical signal having respectively a contra-directional selected wavelength and a co-directional selected wavelength corresponding to said Bragg gratings wherein one of said contra-directional and co-directional wavelengths is chosen as a designated wavelength, and said reflecting optical signal and one of said contra-directional or co-directional optical signals are outside of a predefined range surrounding said designated wavelength.

(Currently Amended) 67. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said first waveguide and said second waveguide are composed of two different materials.

(Currently Amended) 68. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said Bragg gratings disposed on said first waveguide.

(Currently Amended) 69. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said Bragg gratings disposed on said second waveguide.

(Currently Amended) 70. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said Bragg gratings disposed on said first and second waveguides.

(Currently Amended) 71. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said Bragg gratings disposed on a cladding surrounding said first waveguide.

(Currently Amended) 72. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said Bragg gratings disposed on a cladding surrounding said second waveguide.

(Currently Amended) 73. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said Bragg gratings disposed on a cladding in the gap between said first and second waveguides.

(Previously Presented) 74. The wavelength-selective optical transmission system of claim 66 wherein:

said predefined range of wavelength surrounding said designated selected wavelength having a wavelength range between λmin and λmax and said first and second waveguide having an optical propagation constant of β_1 and β_2 respectively.

(Previously Presented) 75. The wavelength-selective optical transmission system of claim 74 wherein:

said contra-directional wavelength is chosen as said designated wavelength and $\beta_1 < \beta_2$ and $\frac{\lambda_{min}}{\lambda_{max}} > \max\left(\frac{2\beta_1}{\beta_1+\beta_2}, \frac{\beta_2-\beta_1}{\beta_1+\beta_2}\right)$.

(Previously Presented) 76. The wavelength-selective optical transmission system of claim 74 wherein:

said contra-directional wavelength is chosen as said designated wavelength and $\beta_1 > \beta_2$ and $\frac{\lambda_{min}}{\lambda_{max}} > \max\left(\frac{\beta_1+\beta_2}{2\beta_1}, \frac{\beta_1-\beta_2}{\beta_1+\beta_2}\right)$.

(Previously Presented) 77. The wavelength-selective optical transmission system of claim 74 wherein:

said co-directional wavelength is chosen as said designated wavelength and $\beta_1 < \beta_2$ and $\frac{\lambda_{min}}{\lambda_{max}} > \min\left[\max\left(\frac{2\beta_1}{\beta_2-\beta_1}, \frac{\beta_2-\beta_1}{\beta_2+\beta_1}\right), \frac{\beta_2-\beta_1}{2\beta_1}\right]$.

(Previously Presented) 78. The wavelength-selective optical transmission system of claim 74 wherein:

said co-directional wavelength is chosen as said designated wavelength and $\beta_1 > \beta_2$ and $\frac{\lambda_{min}}{\lambda_{max}} > \frac{\beta_1-\beta_2}{\beta_1+\beta_2}$.

(Previously Presented) 79. The wavelength-selective optical transmission system of claim 74 wherein:

said contra-directional wavelength is chosen as said designated wavelength and $\beta_2 > 3\beta_1$ and $\frac{\lambda_{min}}{\lambda_{max}} > \frac{\beta_2 - \beta_1}{\beta_1 + \beta_2}$.

(Previously Presented) 80. The wavelength-selective optical transmission system of claim 74 wherein:

said contra-directional wavelength is chosen as said designated wavelength and $\beta_1 < \beta_2 < 3\beta_1$ and $\frac{\lambda_{min}}{\lambda_{max}} > \frac{2\beta_1}{\beta_1 + \beta_2}$.

(Previously Presented) 81. The wavelength-selective optical transmission system of claim 74 wherein:

said contra-directional wavelength is chosen as said designated wavelength and $(\sqrt{5}-2)\beta_1 < \beta_2 < \beta_1$ and $\frac{\lambda_{min}}{\lambda_{max}} > \frac{\beta_1 + \beta_2}{2\beta_1}$.

(Previously Presented) 82. The wavelength-selective optical transmission system of claim 74 wherein:

said contra-directional wavelength is chosen as said designated wavelength and $\beta_2 < (\sqrt{5}-2)\beta_1$ and $\frac{\lambda_{min}}{\lambda_{max}} > \frac{\beta_2 - \beta_1}{\beta_2 + \beta_1}$.

(Previously Presented) 83. The wavelength-selective optical transmission system of claim 74 wherein:

said co-directional wavelength is chosen as said designated wavelength and $\left(\sqrt{5}-2\right)\beta_2 < \beta_1 < \frac{\beta_2}{3}$ and $\frac{\lambda_{min}}{\lambda_{max}} > \frac{2\beta_1}{\beta_2 - \beta_1}$.

(Previously Presented) 84. The wavelength-selective optical transmission system of claim 74 wherein:

said co-directional wavelength is chosen as said designated wavelength and $\beta_1 < \left(\sqrt{5}-2\right)\beta_2$ and $\frac{\lambda_{min}}{\lambda_{max}} > \frac{\beta_2 - \beta_1}{\beta_2 + \beta_1}$.

(Previously Presented) 85. The wavelength-selective optical transmission system of claim 74 wherein:

said co-directional wavelength is chosen as said designated wavelength and $\frac{\beta_2}{3} < \beta_1 < \beta_2$ and $\frac{\lambda_{min}}{\lambda_{max}} > \frac{\beta_2 - \beta_1}{2\beta_1}$.

(Previously Presented) 86. The wavelength-selective optical transmission system of claim 74 wherein:

said co-directional wavelength is chosen as said designated wavelength and $\beta_1 > \beta_2$ and $\frac{\lambda_{min}}{\lambda_{max}} > \frac{\beta_1 - \beta_2}{\beta_1 + \beta_2}$.

(Currently Amended) 87. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said Bragg gratings comprising a periodic variation of a refractive index of an optical propagation material.

(Currently Amended) 88. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said Bragg gratings comprising a periodic variation of a structural characteristic of an optical propagation material.

(Currently Amended) 89. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

said Bragg gratings comprising a periodic variation of a structural characteristic and a refractive index of an optical propagation material.

(Currently Amended) 90. The wavelength-selective optical transmission system of claim ~~46~~ 47 wherein:

at least one of said first and second waveguides are manufactured on a substrate by applying an integrated circuit (IC) manufacturing process thereon.

(Previously Presented) 91. A wavelength-selective optical transmission system comprising:

a first and a second waveguides;

said second waveguide disposed on a vertically stacked position on said first waveguide and at least one of said first and second waveguides having a set of wavelength-selective Bragg gratings disposed near a coupling section between said first and second waveguides wherein said first and second waveguides having different optical propagation constants.

(Previously Presented) 92. The wavelength-selective optical transmission system of claim 91 wherein:

said Bragg gratings comprising a periodic variation of a refractive index of an optical propagation material.

(Previously Presented) 93. The wavelength-selective optical transmission system of claim 91 wherein:

said Bragg gratings comprising a periodic variation of a structural characteristic of an optical propagation material.

(Previously Presented) 94. The wavelength-selective optical transmission system of claim 91 wherein:

said Bragg gratings comprising a periodic variation of a structural characteristic and a refractive index of an optical propagation material.

(Previously Presented) 95. The wavelength-selective optical transmission system of claim 91 wherein:

at least one of said first and second waveguides are manufactured on a substrate by applying an integrated circuit (IC) manufacturing process thereon.

(Previously Presented) 96. The wavelength-selective optical transmission system of claim 91 wherein:

said Bragg gratings disposed on said first waveguide.

(Previously Presented) 97. The wavelength-selective optical transmission system of claim 91 wherein:

said Bragg gratings disposed on said second waveguide.

(Previously Presented) 98. The wavelength-selective optical transmission system of claim 91 wherein:

said Bragg gratings disposed on said first and second waveguides.

(Previously Presented) 99. The wavelength-selective optical transmission system of claim 91 wherein:

said Bragg gratings disposed on a cladding surrounding said first waveguide.

(Previously Presented) 100. The wavelength-selective optical transmission system of claim 91 wherein:

said Bragg gratings disposed on a cladding surrounding said second waveguide.

(Previously Presented) 101. The wavelength-selective optical transmission system of claim 91 wherein:

said Bragg gratings disposed on a cladding in a gap between said first and second waveguides.